Vulnerability Assessment Mapping Report: 1999/2000

An Analysis of Current Food Security in Rural Zambia

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EXECUTIVE SUMMARY

The Vulnerability Assessment and Mapping (VAM) report is an annual activity whose main objective is to present a summary of the analysis and identification of rural districts that are food insecure. The VAM report also recommends specific intervention options in the food insecure districts and provides a basis for any further in-depth analysis. This VAM report covers the 1999/2000 marketing year (May 1999 to April 2000).

➢ Methodology

An income approach methodology is used whereby all measurable sources of current income are valued in real terms, summed, and converted into per capita terms for each district. Then, based on province-specific minimum-cost food baskets, calculations are made of the number of months of food requirements current income would cover. Adjustments to these figures are made based on qualitative information and districts with less than 9 months of food access are identified as facing possible food security problems.

This report gives information on the livelihood conditions of rural people in Zambia. Secondary data used in the analysis were obtained from the various information systems (FHANIS, CSO, and MAFF). The reliance upon the widely used data sets helps to strengthen the transparency and accessibility of this VAM analysis. It also directly links any suggested food security interventions to a common source of nationally generated, regularly updated, long term information about the nature of food security conditions in Zambia.

➢ Seasonal Overview

Rainfall patterns during the 1998/99 agricultural season were mixed. Districts in Western Province (Senanga, Sesheke, and Shangombo) and most of Southern Province (Choma, Gwembe, Itezhi-tezhi, Kalomo, Kazungula, Livingstone, Monze, Siavonga and Sinazongwe) experienced below normal rainfall, while those in Luapula Province (Samfya), Northern Province (Chilubi), and Copperbelt Province (Chingola, Kalulushi and Kitwe) experienced excess rainfall. Overall, however, with a few exceptions, rainfall timing and distribution was favorable to crop development.

Cattle deaths mainly caused by East Coast Fever reduced the contribution of livestock to total income, especially in Southern Province. Other prevailing major cattle diseases were Contagious Bovine Pleuro Pneumonia (CBPP), Anthrax and Foot and Mouth disease. Anthrax was confined to Western Province while CBPP affected both Western as well as extreme Northern Province Districts. Foot and Mouth disease affected livestock in parts of Southern and extreme northern Zambia Districts. There were no significant diseases affecting other large livestock apart from those in cattle.

Using the crop forecast estimates, the national food balance sheet shows a surplus situation when all major foods are taken into account (cereals and tubers). On individual food commodity basis, maize and rice fell short of meeting the total requirement.

➢ Current Food Security Status

The results of the CVA are presented in terms of food insecurity levels. Districts were classified as either food secure or food insecure using the following definitions:

- **Extremely Food-Insecure** – populations that are now or which will soon be unable to meet their consumption needs. They have already exhausted their strategies for acquiring food and are currently destitute.

- **Highly Food-Insecure** – populations that will not be able to meet their consumption needs during the given consumption period. They will be forced to reduce consumption and dispose of their productive assets, thereby undermining their future food security.

- **Moderately Food-Insecure** - populations that can meet their consumption needs during the given consumption period only by intensifying their normal coping strategies. These households are vulnerable to any subsequent shock, either in the given or subsequent consumption period.

- **Food-Secure** – populations that can meet their consumption needs during the given consumption period using income derived from strategies that do not compromise future food security.

Food security at the national level is assured during the current consumption year, and, in general, most areas are more food secure this year compared to last year. This can mostly be attributed to a relatively good season as far as rainfall was concerned despite some localised rainfall problems. Only six districts - Luangwa, Mpika, Kabompo, Shangombo, Chavuma and Chadiza were categorised in the highly food insecure group of districts based on secondary data and additional qualitative information. Another 38 districts are moderately food insecure. These include: Itezhi-tezhi, Kazungula, Sinazongwe (Southern Province); Kawambwa, Mansa, Mwense, Chienge (Luapula Province); Chama, Chipata, Nyimba Mambwe (Eastern Province); Lufwanyama, Masaiti (Copperbelt Province); Serenje, Kapiri Mposhi (Central Province); Kaoma, Mongu (Western Province); Mpika, Milenge, Isoka, Kasama, Mporokoso, Chinsali, Luwingu, Mbala, Mpulungu, Chilubi, Mungwi (Northern Province); Kafue, Luangwa, Chongwe (Lusaka Province); and Chavuma, Mwinilunga, Mufumbwe, Kabompo, Zambezi, Kasempa (North western Province).

➢ Limitation of the Study

The study does not include income from off season production in rural areas because there is no data available on off-season production. Crop data used are estimates from the crop forecast. Post harvest assessment data were not available at the time of the analysis. The analysis does not cover urban districts

Chapter 1: Introduction

1.1 General Objectives of the Assessment

This report gives information on the livelihood conditions of rural people in Zambia. The analysis relied heavily on agricultural production data and other types of district level data which are updated annually. Analysis of all available data and information provides an integral picture of food security during the period under review.

It is important to note that the reliance upon the widely used data sets helps to strengthen the transparency, accessibility and concrete utility of this VA analysis. It also directly links any suggested food security interventions to a common source of nationally generated, regularly- updated, long-term information about the nature of food security conditions in Zambia. The Ministry of Agriculture Food and Fisheries (MAFF), Central Statistical Office (CSO), Meteorological Department as well as Food, Health and Nutrition Information System (FHANIS) provided the data used in the analysis. The collaboration of the arms of government as well as the VAM Steering group who are the custodians of these data sets has been essential in completing the assessment and is sincerely appreciated.

- The purpose of this 1999/2000 Zambia Food Security and Vulnerability Assessment (VA) report is to provide local, national and international decision-makers with objective and transparent information about areas that are potentially food insecure and to suggest intervention options to mitigate against the situation.

1.2 Populations considered in the Assessment

The populations that are the focus of this assessment are those found in rural areas in the 72 districts of Zambia. Most of these districts are agriculturally based with predominance of small-scale farming, animal husbandry and a small, but diverse number of other sources of income for their livelihood.

1.3 Unit of Analysis

Vulnerability analysis can be done at various levels, including -: national, district, community and household. Each of these different levels is meant to achieve different objectives. In Zambia, the smallest unit for which current and reliable information is available is the district. Further analysis to smaller units would require different methodologies.

For 1999/2000, we have maintained the VAM as a geographic targeting tool to determine which districts, NOT households or communities, are food insecure and the likely degree of food insecurity being faced by an average household in the district. Follow-up food needs assessments are needed to target appropriate interventions at the household or community level.

1.4 Methodology

An income based approach was used to estimate household access to food during 1999/2000. This required the valuation of all crop production from the main season harvest in April/May as well as off-take from livestock and income from fishing and wild foods. The quantity produced for each commodity was multiplied by the real May 1999 price observed in each province. Income from salaries, wages, and remittances was also calculated.

The minimum cost of a food basket that will ensure a household of six people gets the necessary nutrients for a healthy and active life was calculated using a linear programming model (LINDO). Province-specific food baskets were determined based on regional food consumption patterns. The overall cost per province was obtained taking into consideration the real cost per unit for each item prevailing in each province. The cost of the food basket was assumed to be 70% of the total household expenditure (World Bank Development Report, 1996). Based on these parameters, an income threshold was calculated for each province.

The minimum threshold per capita per year was compared to the current per capita income to estimate the number of months a person has of access to food. An initial classification of districts into the various categories was made based only on the number of months of access to food from measurable sources (table 1.1).

Then, because the analysis does not measure all household income in each district, the next step was to adjust district food security categories based on qualitative information about the performance of known but unmeasured income. Additional adjustments were made based on consideration of factors, such as proximity to markets, access to good roads, evidence of acceptable nutritional status and incidence of excessive rainfall and flooding. A value of 9 months was considered food secure to account for the fact that not all sources of income were measured and households tend to adjust their consumption levels as needed throughout the year.

Table 1.1

Number of Months of Food Access	Food Security Category
Less than 6 months	Highly food insecure
6 to 9 months	Moderately food insecure
> 9 months	Food secure

The different income sources and methods of measurements are summarised as follows:

Table 1.2

Resources	Data Used	Method Used for Calculation / Estimation
Crops	Crop Statistics at Provincial and District levels- provided by the Ministry of Agriculture, Food And Fisheries. In addition, commodity prices information, as well as the Consumer price index was obtained from the Agricultural Marketing Information Centre (AMIC) in the MAFF.	Maize, sorghum, millet, nice, cotton, sunflower, paddy rice, tobacco, mixed beans, groundnuts, cassava production of small and medium scale farmers for each year 1985 to 1995 were multiplied by the ***real price*** of each crop. The total value of crop production summed for each year from 1985 to 1995 and divided by 11 to obtain the baseline average.
Livestock	Livestock Statistics at Provincial and District levels- provided by the Ministry of Agriculture, Food And Fisheries,	Livestock population (cattle, goats and sheep, pigs) for each year were multiplied by ***the real price*** of livestock per head..
Fisheries	MAFF Data base of Fisheries production by major catchment area.	Data on fish catches was multiplied by the existing per unit ***real price*** of fish to obtain an estimate of income generated from fishing
Transfers	Zambia Household Budget survey	The estimation of income transfers is based on the method used in 1996 VAM for calculating income transfers. The major difference is that income is not converted to maize equivalents. The CPI was used to deflate these transfers.
Wild Foods	Estimates based on consumption levels assumed for the rural and urban population.	The prices used to obtain income contribution were those obtained at district markets for the common wild foods traded such as ***masuku, lusala***, mushroom etc.
Wages and salaries	Based on 1996 VAM Methodology	Data as obtained in the Living Conditions Survey of 1996 deflated by the CPI.

Chapter 2: Assessing Current Food Security Status (1999/2000)

2.1 Rainfall

During 1998/99 season, the rains started from the west, and progressed eastwards. The north east districts (Chama Lundazi, Isoka, Chinsali, Mbala and Nakonde) experienced extended dry spells during the months of December, January and early February. Despite the delayed and erratic start of the rains in areas, favourable growing conditions prevailed from late February to April.

There was heavy rainfall over the central and the eastern parts of the country that affected not only crops but also infrastructure such as residential buildings and bridges. The worst hit areas were Katete, Kabwe, the Gwembe Valley, Kabompo and Zambezi districts. The localised water logging and flash floods caused leaching and washing away of nutrients from the fields.

Despite the rainfall distribution moisture levels were adequate enough to support normal crop growth, except in a few areas such as Western Province and in some districts in Southern Province where excessive rainfall caused crop damage due to water logging.

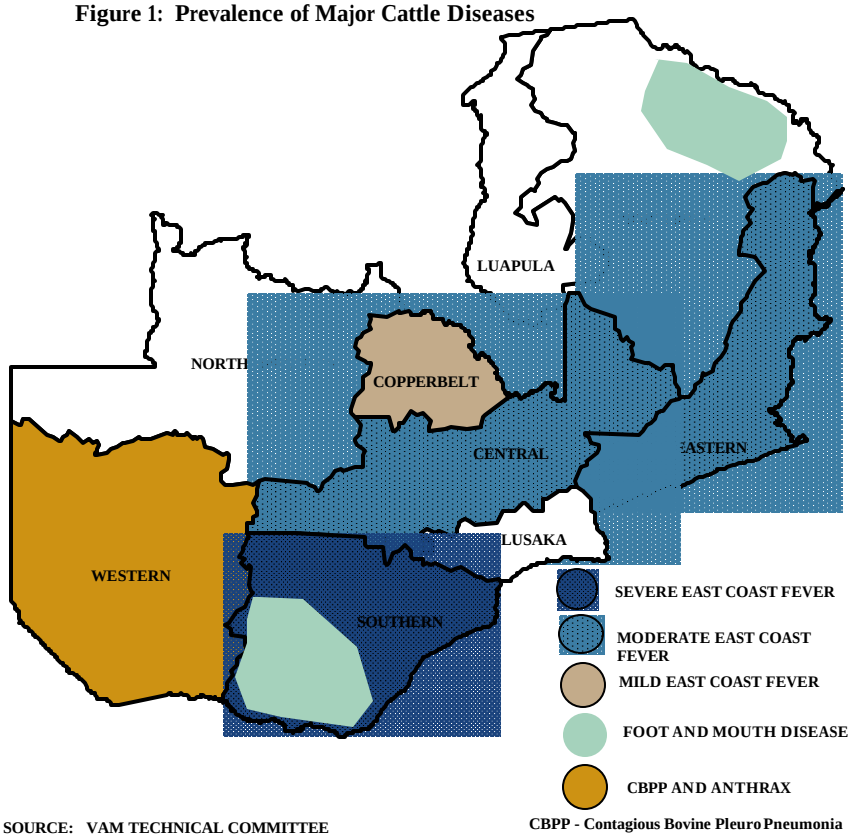
The rainfall pattern could partially explain the improved crop output over the previous season.

2.2 Livestock Disease Situation

Livestock diseases were another major factor that affected the income generating ability of some people. The most prevalent diseases that affected major livestock during the 1998/99 season were Theileriosis (Corridor Disease), Contagious Bovine Pleuro Pneumonia (CBPP), Anthrax, Foot and Mouth. Corridor disease was the most prevalent and occurred in four of the nine provinces. Anthrax and CBPP on the other hand were confined to Western Province while foot and mouth disease affected Southern Province and Northern Province districts. The situation is depicted in the Figure 1.

Although corridor disease was reported in Copperbelt, Central, Eastern and Southern Province, it was alarming in Southern Province, which had the highest number of confirmed cases as well as deaths. The other three provinces, and especially Copperbelt, had low risk of corridor disease. In Eastern Province, the situation was brought under control through immunisations using local vaccines and the situation there is not worrying. In Southern Province districts of Mazabuka, Monze, Choma, Kalomo, Livingstone, Namwala and Sinazongwe, the deaths due to corridor disease have significantly reduced cattle population and the situation is alarming. Among the Southern Province districts, only Siavonga and Gwembe were currently at no risk of Corridor Disease. These are also the areas of low cattle production. Anthrax only occurred in Western Province and specifically in Kalabo, Mongu, Kaoma, and Senanga.

Figure 1: Prevalence of Major Cattle Diseases



SOURCE: VAM TECHNICAL COMMITTEE

CBPP - Contagious Bovine Pleuro Pneumonia

Foot and Mouth disease affected districts bordering Tanzania such as Mbala and Nakonde, as well as Kazungula and Livingstone in Southern Province. Animal movements out of these infested areas have been banned.

Cattle deaths due to disease had a negative impact on crop production in Southern and Western Provinces where farmers depend heavily on draft power for land preparation, as well as a source of income. Increased loss of animals due to disease had a high impact on livelihoods in these areas.

2.3 National Food Availability

Though the national picture shows adequate national food availability (see Table 2.1), there are a number of variations at district level in terms of food production and availability.

Table 2.1: National Food Balance Sheet, 1999-2000 Consumption Year

	Maize	Rice	Wheat	Sorghum / Wheat	Cassava (Dry Weight)	Other Tubers	Total
A. Opening Stocks 1/	35,000		25,000				60,000
B. Production 2/	855,869	14,699	89,743	95,112	968,583	407,722	2,431,728
C. Total Availability(A+B)	890,869	14,699	114,743	95,112	968,583	407,722	2,491,728
D. Staple Food Requirement 3/	1,266,851	17,032	113,668	86,912	585,188	380,570	2,450,222
E. Surplus / Deficit	-375,982	-2,333	1,075	8,200	383,395	27,152	41,506

Source: Ministry of Agriculture Food and Fisheries, Early Warning Unit.

Notes to the balance sheet
1/ Stocks expected to be held by commodity traders, FRA, millers and commercial farmers as at 1st May, 1999.
2/ Forecasted production for the current growing season. For wheat, this includes both irrigated (50,000mt) and rainfed(39,346mt).
3/ Components of this are; human consumption, food reserve stocks, stock feeds, breweries, seed, export / cross border trade and losses.

2.4 Analysis of Contributions to Total Income

Income contribution from livestock decreased in major livestock areas of Southern and Western Provinces compared to the previous season. The main reasons were:

- The general decline in livestock population due to diseases in the main livestock areas.
- The general decline in livestock prices as a result of high demand for liquid resources. Further, the livestock diseases led many farmers to dispose of their healthy livestock before the expected onset of corridor disease.

Generally the contribution of cereal and cash crop production to total income has increased compared to the previous year. This could be attributed to increased output due to more favourable rainfall. In the case of cash crops, increased production of new cash crops such as paprika also contributed.

Cereals continue to contribute the largest share of total income in most districts. The percentage contribution by different sectors at district level is shown in Table 2.2, where "Other" is defined as the sum of fisheries, transfers, wild foods, wages and salaries (section 1.3).

Table 2.2 Contribution to Total Income By Livelihood Sector

Districts	Contribution to Total Income in Kwacha and Percent of Total									
	Cereal		Cash Crops		Livestock		Other		Total	
	Kwacha	%	Kwacha	%	Kwacha	%	Kwacha	%	Kwacha	%
Luangwa	22847	99.9	0	0.0	0	0.0	30	0.1	22877	100
Lufwanyama	18496	87.1	2740	12.9	0	0.0	0	0.0	21236	100
Mpika	31414	90.9	3145	9.1	0	0.0	3	0.0	34562	100
Milenge	22491	86.3	3573	13.7	0	0.0	0	0.0	26064	100
Chavuma	15432	60.1	10241	39.9	0	0.0	0	0.0	25673	100
Isoka	34914	91.0	3441	9.0	0	0.0	0	0.0	38355	100
Itezhi-tezhi	37274	97.2	1093	2.9	0	0.0	0	0.0	38368	100
Mwinilunga	19095	69.0	8588	31.0	0	0.0	3	0.0	27686	100
Kasama	32721	80.8	7785	19.2	0	0.0	0	0.0	40506	100
Chienge	26272	84.3	4897	15.7	0	0.0	0	0.0	31168	100
Mporokoso	32963	76.5	10133	23.5	0	0.0	4	0.0	43100	100
Chinsali	37922	87.9	5245	12.2	0	0.0	0	0.0	43167	100
Kabompo	20452	65.1	10982	34.9	0	0.0	6	0.0	31440	100
Luwingu	40601	85.7	4520	9.5	0	0.0	2260	4.8	47381	100
Kawambwa	23463	63.0	10527	28.3	0	0.0	3247	8.7	37236	100
Mufumbwe	28551	82.1	6222	17.9	0	0.0	7	0.0	34780	100
Chongwe	37590	74.9	12528	25.0	0	0.0	95	0.2	50214	100
Kafue	34778	65.8	17159	32.5	0	0.0	941	1.8	52878	100
Shangombo	37988	97.5	928	2.4	0	0.0	62	0.2	38978	100
Masaiti	30521	77.6	8790	22.4	0	0.0	0	0.0	39311	100
Chadiza	28132	55.9	17640	35.0	4594	9.1	0	0.0	50366	100
Kaoma	19341	47.1	4768	11.6	16908	41.2	12	0.0	41029	100
Zambezi	17608	42.7	20585	49.9	3092	7.5	4	0.0	41289	100
Serenje	31892	56.8	4128	7.4	20138	35.9	0	0.0	56158	100
Mansa	23124	46.7	5017	10.1	0	0.0	21386	43.2	49528	100
Mwense	27641	52.5	4331	8.2	0	0.0	20643	39.2	52614	100
Kazungula	30516	43.0	3713	5.2	36735	51.7	35	0.1	71000	100
Mbala	41591	57.4	6433	8.9	0	0.0	24498	33.8	72521	100
Chama	46803	70.9	10758	16.3	8442	12.8	0	0.0	66003	100
Mpulungu	61438	81.3	14122	18.7	0	0.0	0	0.0	75560	100
Kasempa	42922	81.9	9501	18.1	0	0.0	10	0.0	52433	100
Kapirimposhi	47382	67.1	11367	16.1	11854	16.8	0	0.0	70604	100
Sinazongwe	23869	27.9	163	0.2	54713	63.8	6951	8.1	85696	100
Chilubi	19622	30.5	4078	6.3	0	0.0	40719	63.2	64419	100
Chipata	39068	48.9	34161	42.7	6698	8.4	8	0.0	79935	100
Mongu	19790	31.7	850	1.4	41793	66.9	50	0.1	62483	100
Mungwi	65894	72.9	24508	27.1	0	0.0	0	0.0	90403	100
Nyimba	45171	54.4	8419	10.1	29521	35.5	0	0.0	83112	100
Mambwe	24998	29.8	58804	70.2	0	0.0	0	0.0	83802	100
Solwezi	22691	32.5	23950	34.3	23278	33.3	7	0.0	69926	100
Petauke	37023	39.7	3966	4.3	52339	56.1	0	0.0	93329	100
Sesheke	18188	24.9	2156	3.0	52701	72.1	29	0.0	73074	100
Senanga	17237	23.3	30	0.0	56672	76.6	7	0.0	73946	100
Lundazi	34423	35.8	8546	8.9	53256	55.3	0	0.0	96225	100

Samfya	19998	24.9	4913	6.1	0	0.0	55360	69.0	80271	100
Kaputa	53790	49.7	4257	3.9	0	0.0	50280	46.4	108327	100
Nakonde	96078	88.0	13114	12.0	0	0.0	0	0.0	109192	100
Mkushi	30765	29.8	2057	2.0	70556	68.3	0	0.0	103378	100
Kalabo	19753	23.0	0	0.0	65972	77.0	9	0.0	85734	100
Nchelenge	24521	24.6	1885	1.9	0	0.0	73305	73.5	99711	100
Lukulu	19870	20.9	228	0.2	75037	78.9	38	0.0	95174	100
Kalomo	25444	18.3	3426	2.5	110395	79.3	0	0.0	139265	100
Choma	45721	31.5	13032	9.0	86209	59.5	14	0.0	144977	100
Monze	38629	26.2	7239	4.9	99963	67.8	1607	1.1	147438	100
Gwembe	23727	15.8	2600	1.7	109439	72.8	14501	9.7	150267	100
Mumbwa	37497	28.3	8440	6.4	86561	65.3	0	0.0	132498	100
Mpongwe	56767	52.2	51712	47.6	0	0.0	228	0.2	108707	100
Siavonga	30235	19.3	0	0.0	119891	76.5	6533	4.2	156659	100
Katete	41758	28.1	14718	9.9	92325	62.0	0	0.0	148800	100
Mazabuka	77116	44.7	12519	7.3	77099	44.7	5940	3.4	172674	100
Chibombo	115028	60.6	24684	13.0	50147	26.4	19	0.0	189877	100
Namwala	32836	14.5	5676	2.5	147988	65.4	39620	17.5	226143	100

2.5 Analysis of Measurable Food Access

Results of the analysis of measurable food access and the preliminary classification of districts based on the number of months of access to food are presented below.

2.5.1 Districts with less than 6 Months of Measurable Food Access

Twenty-one districts in all fell in this category. The majority of these districts are in the Northern Province while Luapula had the second most districts in this category.

Among these districts, Luangwa and Lufwanyama districts recorded the lowest number of months of access to food using the criteria of the measurable sources of income discussed in this report. These two districts according to Table 2.3 depend on cereal production for their main source of income. Table 2.3 also shows that the majority of these districts depend on cereal and cash crop production for their main source of income.

Table 2.3 Districts with Less than 6 months of Measurable Food Access

Districts	Total Income	Minimum Income Threshold	Number of Months of Food Access
Luangwa	22876.70	118795.12	2.31
Lufwanyama	21237.82	87544.63	2.91
Mpika	34562.14	125063.76	3.32
Milenge	26064.14	92762.52	3.37
Chavuma	25673.30	86405.21	3.57
Isoka	38358.99	125063.76	3.68
Itezhi-tezhi	38367.68	125063.76	3.68
Mwinilunga	27685.56	86405.21	3.84

Kasama	40506.04	125063.76	3.89
Chienge	31168.18	92762.52	4.03
Mporokoso	43099.85	125063.76	4.14
Chinsali	43167.29	125063.76	4.14
Kabompo	31439.77	86405.21	4.37
Luwingu	47381.26	125063.76	4.55
Kawambwa	37236.30	92762.52	4.82
Mufumbwe	34780.48	86405.21	4.83
Chongwe	50213.88	118795.12	5.07
Kafue	52878.42	118795.12	5.34
Shangombo	38978.11	87132.58	5.37
Masaiti	39310.53	87544.63	5.39
Chadiza	50371.14	112042.48	5.39

2.5.2 Districts with between 6 to 9 Months of Measurable Food Access

Sixteen districts fell in this category. Of these Kaoma and Zambezi had the fewest months of food access. Cross-reference with Table 2.2 above shows that a number of districts recorded in this category have a significant livestock dependence. Specifically districts such as Kaoma, Serenje, Sinazongwe, Mongu, Kazungula, Mansa have a livestock contribution of over 40 percent to total measurable income.

Table 2.4: Districts with 6-9 months of Measurable Food Access

Districts	Total Income	Minimum Income Threshold	Number of Months of Food Access
			1999/2000
Kaoma	41028.56	87132.58	5.65
Zambezi	41285.17	86405.21	5.73
Serenje	56157.50	107918.97	6.24
Mansa	49527.57	92762.52	6.41
Mwense	52619.56	92762.52	6.81
Kazungula	70999.97	125063.76	6.81
Mbala	72521.04	125063.76	6.96
Chama	66003.02	112042.48	7.07
Mpulungu	75560.12	125063.76	7.25
Kasempa	52432.83	86405.21	7.28
Kapirimposhi	70604.18	107918.97	7.85
Sinazongwe	85704.09	125063.76	8.22
Chilubi	64419.08	92762.52	8.33
Chipata	79926.65	112042.48	8.56
Mongu	62488.87	87132.58	8.61
Mungwi	90402.62	125063.76	8.67
Nyimba	83111.94	112042.48	8.90
Mambwe	83802.24	112042.48	8.98

2.5.3 Districts with 9 to 12 Months of Measureable Food Access

Ten districts recorded current income that when valued and compared to the minimum income threshold yielded between 9 to 12 months of measurable food access. These were considered food secure.

Table 2.5: Districts with 9-12 Months of Measurable Food Access

Districts	Total Income	Minimum Income Threshold	Number of Months of Food Access
Solwezi	69925.86	86405.21	9.71
Petauke	93328.68	112042.48	10.00
Sesheke	73073.99	87132.58	10.06
Senanga	73946.27	87132.58	10.18
Lundazi	96234.57	112042.48	10.31
Samfya	80279.12	92762.52	10.39
Kaputa	108315.83	125063.76	10.39
Nakonde	109192.34	125063.76	10.48
Mkushi	103378.35	107918.97	11.50
Kalabo	85733.82	87132.58	11.81

2.5.4 Districts with Greater than 12 months of Measurable Food Access

There are 13 districts with more than adequate food access for the current consumption year. Of these about 50 percent were in Southern Province.

Table 2.6: Districts with Greater than 12 Months of Measurable Food Access

Districts	Total Income	Minimum Income Threshold	Number of Months of Food Access
Nchelenge	99721.15	92762.52	12.90
Lukulu	95164.49	87132.58	13.11
Kalomo	139264.62	125063.76	13.36
Choma	144962.14	125063.76	13.91
Monze	147438.15	125063.76	14.15
Gwembe	150266.63	125063.76	14.42
Mumbwa	132498.34	107918.97	14.73
Mpongwe	108706.92	87544.63	14.90
Siavonga	156659.05	125063.76	15.03
Katete	148815.35	112042.48	15.94
Mazabuka	172673.60	125063.76	16.57
Chibombo	189877.37	107918.97	21.11
Namwala	226143.18	125063.76	21.70

2.5.5 Incorporation of Qualitative Information

After taking into account the measurable sources of income, additional qualitative information such as access to markets, knowledge of other sources of income that were not measured, e.g. charcoal production, beer brewing and trading and the effects of excessive rainfall and dry spells in some parts, was used to make adjustments in the preliminary classificaton of districts (Table 2.7 and Figure2). Of the 21 districts that had less than 6 months of measurable food access, 6 were found to be highly food insecure following the definitions give on page 2.The rest were found to be moderately food insecure.

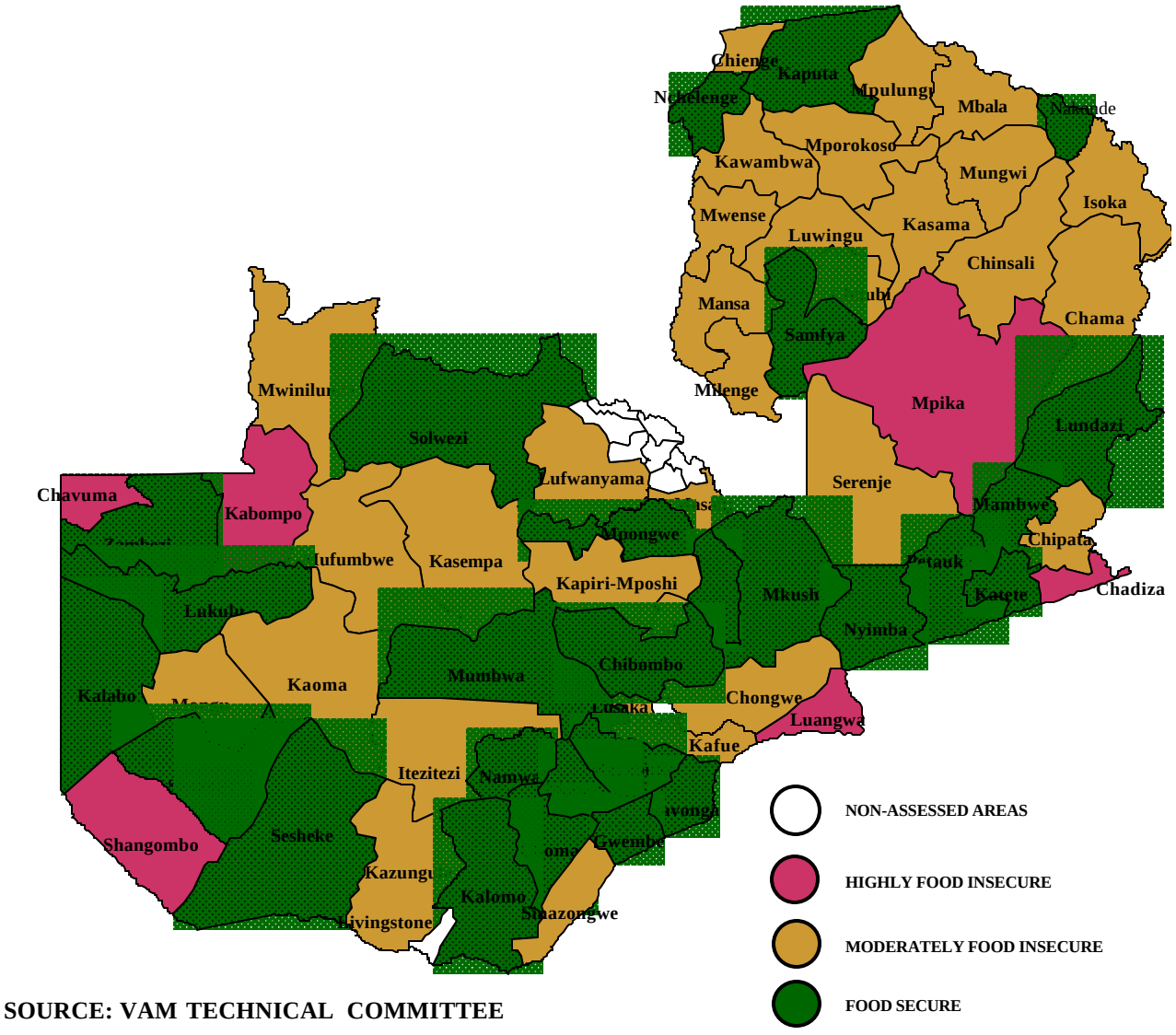
It is important to emphasize that the above categorisation largely depends on secondary data of measurable income and qualitative adjustments. There is need for field visits to establish actual status of food security in these districts. Thus far the following areas were visited by FEWS:

Masaiti, Lufwanyama, Kazungula and Sinazongwe (moderately food insecure), and Choma, Kalomo (food secure).

Table 2.7: Classification of Districts according to Current Food Security Status

Highly Food Insecure	Moderately Food Insecure	Food Secure
Mpika Chavuma Chadiza Shangombo Kabompo Luangwa	Lufwayama, Milenge, Isoka, Itezhi-tezhi, Mwinilunga, Kasama, Chienge, Mporokoso, Chinsali, Luwingu, Kawambwa, Mufumbwe, Chongwe, Kafue, Masaiti, Kaoma, Zambezi, Serenje, Mansa, Mwense, Kazungula, Mbala, Chama, Mpulungu, Kasempa, Kapiri Mposhi, Sinazongwe, Chilubi, Chipata, Mongu, Mungwi, Nyimba and Mambwe	Solwezi, Petauke, Sesheke, Senanga, Lundazi, Samfya, Kaputa, Nakonde, Mkushi, Kalabo, Nchelenge, Lukulu, Kalomo, Choma, Monze, Gwembe, Mumbwa, Mpongwe, Siavonga, Katete, Mazabuka, Chibombo and Namwala.

Figure 2: Food Security Status at District Level



SOURCE: VAM TECHNICAL COMMITTEE

Chapter 3 Chronic Factors Affecting Current Food Security

In dealing with food security in rural areas, certain factors which have a direct bearing on vulnerability to food insecurity need to be considered. Of importance among these are market accessibility, health, rainfall performance and livestock diseases.

Accessibility to Nearest District Market

Market accessibility analysis was based on the average district cost of transportation between districts and by type of road. This is done in order to measure the exchange opportunities of rural households. The market is an important source of demand for rural products as well as a source of supply of outside goods but many rural districts have problems with physical access to the markets. Even though some of these areas have developed coping strategies to get by, they are still affected by the higher costs and have fewer opportunities to improve their household incomes and tend to remain at a disadvantage compared to areas that have more access to markets.

However, this categorisation may not provide the actual variations in accessibility within the district, but provides a general overview of the accessibility situation. Most apparent, however, from the analysis is the fact that most of rural Zambia has continued to be inaccessible or having low grade type of roads. It is however important to note that this categorisation does not provide a detailed view of the actual state of rural roads, but suffices to give an indication of the accessibility of rural households in these districts to services as well as trade. It is therefore likely that most of the areas in these districts would be highly impassable during the rainy season..

Health Status

The health conditions of rural population have a significant impact on productivity. One of the major health problems Zambia is facing is the HIV/AID incidence. The UNAIDS recommended measure of extent of HIV prevalence in the population is prevalence among 15-49 years old age group[1]. In 1998 the average HIV prevalence rate for Zambia was estimated at 19.7%. The prevalence rates by province is depicted in Figure 3.

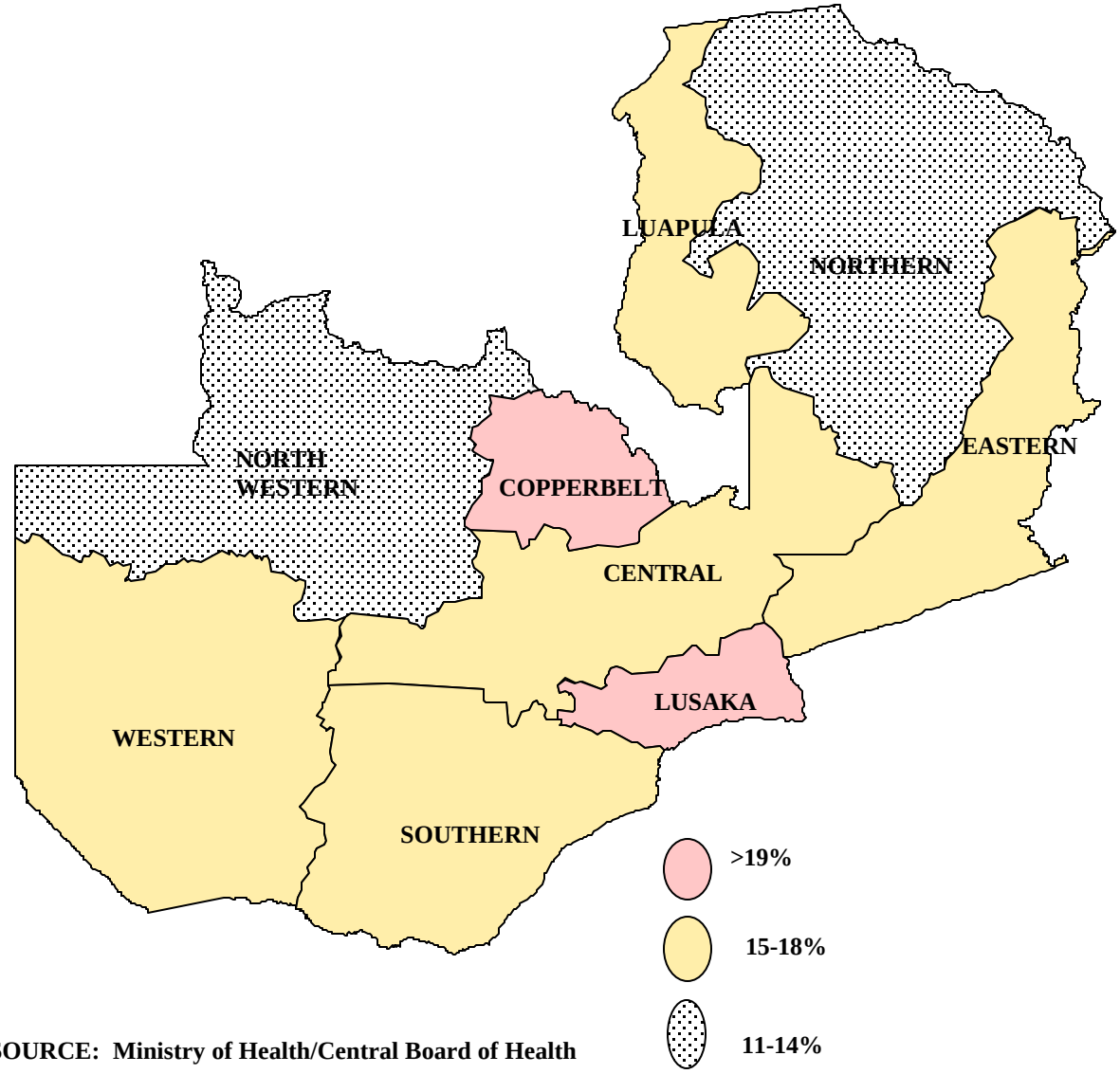
Figure 3 shows that HIV prevalence is highest in Lusaka and Copperbelt Provinces and lowest in Northern and North-Western Provinces. All other areas fall in between.

These figures indicate the extent of the problem and obviously the fact that such high rates among the most productive age group has a negative impact on productivity and their income-earning ability. In turn, this puts their dependents at risk, particularly children and the elderly. It is also evident that HIV rates in Zambia are very high and the effect of the virus should not be ignored when dealing with food security issues.

[1] HIV/AIDS in Zambia., Ministry of Health/Central Board of Health Publication, September 1999

Some surveillance results have shown that HIV prevalence in Zambia has been largely stable at 19%-20% since 1994. This is however not to say that the situation has been brought under control.

Figure 3: HIV Prevalence, Ages 15 to 49, By Province in 1998



SOURCE: Ministry of Health/Central Board of Health

Chapter 4:
Conclusions and Recommendations

This report has identified that most people in the country are generally better off than the preceding year in terms of food security. However, analysis has shown that 6 districts (Mpika, Chavuma, Chadiza, Shangombo, Kabompo, Luangwa) are highly food insecure. Populations in these districts will only be able to meet their food needs during the current consumption year through income and savings depletion activities that are likely to compromise their future food security. Follow-up assessments are needed to confirm the findings of this assessment and to establish emergency relief needs, if warranted.

Improvements in the following areas would contribute to long-term gains in food security and reduce vulnerability to food insecurity:

Rural Road Infrastructure

A number of potentially productive districts have low productivity due to the problem of accessibility and isolation. Most private traders do not visit these areas due to impassable roads. It is therefore important to initiate programmes that would improve accessibility to these areas by improving community roads as well as feeder roads. Food-for Work programmes in rural areas, including those run by WFP, should all be geared towards improving accessibility. There is a need to encourage close liaison between, WFP, RTTP (Rural Travel and Transport Programme) under the Ministry of Local Government and Housing and NGO's operating in these areas and to develop mechanisms of promoting rural accessibility.

Support to the Livestock Sector

It is quite evident that most of the districts, particularly those in Southern and Western Province, consider livestock as an important source of income and livelihood, and yet during the 1998/99 agricultural season, a significant number of the existing stock in the food growing districts of the provinces died due to disease. Systematic programmes that are targeted towards improving the livestock, or restocking should be considered. Vaccination campaigns against the most prevalent diseases should be reinforced. Disease resistant animals for draught power should be considered. The donkey is an immediate example that could be introduced. Initiatives under ASIP to improve livestock condition should be increased.

Improved Small-Scale Fisheries Development

This is another important source of income and food among some households in Western, Southern, Northern and Luapula Provinces. However, currently, and particularly in Sinazongwe district of Southern Province, most indigenous households are not involved in fishing due to the amount of initial income needed to purchase the required equipment. Programs under ASIP to promote fish farming should be encouraged. Extension programs should emphasise fishing as an additional source of income in fish farming areas. Community based fish farming should also be encouraged.